WHAT IS CLAIMED IS:

1. A recombinant polynucleotide comprising a nucleotide sequence encoding at least 5 consecutive amino acids from Repro-PC-1.0 polypeptide (SEQ ID NO:2).

2. The polynucleotide of claim 1 wherein the nucleotide sequence encodes native Repro-PC-1.0 polypeptide (SEQ ID NO:2).

3. The polynucleotide of claim 1 wherein the nucleotide sequence encodes a Repro-PC-1.0 polypeptide analog.

4. The polynucleotide of claim 1 wherein the nucleotide sequence encoding at least 5 consecutive amino acids from Repro-PC-1.0 polypeptide is identical to a nucleotide sequence from SEQ ID NO:1.

5. The polynucleotide of claim 2 wherein the nucleotide sequence is identical to nucleotides 151-1425 of SEQ ID NO:1.

6. The polynucleotide of claim 3 wherein the nucleotide sequence encodes an immunogenic Repro-PC-1.0 polypeptide analog.

7. A polynucleotide probe or primer of at least 7 nucleotides that specifically hybridizes to a nucleotide sequence selected from Repro-PC-1.0 cDNA (SEQ ID NO:1) or its complement.

8. The polynucleotide probe or primer of claim 7 whose sequence is identical or complementary to a nucleotide sequence selected from Repro-PC-1.0 cDNA (SEQ ID NO:1).

9. The polynucleotide probe of claim 7 further comprising a label.

1   10. An inhibitory polynucleotide comprising an antisense sequence of at least 7

2 nucleotides that specifically hybridizes to a nucleotide sequence selected from Repro-PC-

3 1.0 cDNA of SEQ ID NO:1 and that inhibits expression of Repro-PC-1.0 in cells.

1   11. The inhibitory polynucleotide of claim 10 whose sequence is complementary

2 to a nucleotide sequence selected from Repro-PC-1.0 cDNA (SEQ ID NO:1).

1   12. A recombinant polynucleotide comprising an expression control sequence

2 operably linked to a nucleotide sequence encoding:

3   a Repro-PC-1.0 polypeptide,

4   a Repro-PC-1.0 analog,

5   a polynucleotide probe or primer of at least 7 nucleotides that specifically

6 hybridizes to a nucleotide sequence selected from Repro-PC-1.0 cDNA (SEQ ID NO:1)

7 or its complement, or

8   an inhibitory polynucleotide comprising an antisense sequence of at least 7

9 nucleotides that specifically hybridizes to a nucleotide sequence selected from Repro-PC-

10 1.0 cDNA (SEQ ID NO:1) and that inhibits expression of Repro-PC-1.0 in cells.

1   13. A recombinant cell comprising a recombinant polynucleotide of claim 12.

1   14. A method for detecting a polynucleotide comprising a nucleotide sequence

2 selected from Repro-PC-1.0 cDNA (SEQ ID NO: 1) or its complement in a sample

3 comprising the steps of:

4   (a) contacting the sample with a polynucleotide probe or primer comprising a

5 sequence of at least 7 nucleotides that specifically hybridizes to the nucleotide sequence

6 and

7   (b) detecting whether the polynucleotide has specifically hybridized to the

8 polynucleotide,

9   whereby specific hybridization provides a detection of the polynucleotide in the

10 sample.

15. A method of inhibiting Repro-PC-1.0 expression in a cell comprising providing the cell with an inhibitory polynucleotide of claim 10 or with a polynucleotide comprising a nucleotide sequence that encodes a decoy Repro-PC-1.0 analog.

16. A purified, recombinant Repro-PC-1.0 polypeptide whose amino acid sequence is identical to that of SEQ ID NO:2, or allelic variants of SEQ ID NO:2.

17. A Repro-PC-1.0 polypeptide analog that is not naturally occurring and that comprises a sequence of at least 5 consecutive amino acids selected from the amino acid sequence of Repro-PC-1.0 polypeptide (SEQ ID NO:2).

18. The Repro-PC-1.0 polypeptide analog of claim 17 which is a decoy that competes with Repro-PC-1.0 polypeptides for interaction with molecules that naturally interact with Repro-PC-1.0.

19. The Repro-PC-1.0 polypeptide analog of claim 17 which, when presented as an immunogen, elicits the production of an antibody which specifically binds to native Repro-PC-1.0 polypeptide.

20. A composition comprising an antibody that specifically binds to Repro-PC-1.0 polypeptide (SEQ ID NO:2).

21. The composition of claim 20 wherein the antibodies are monoclonal antibodies.

22. The composition of claim 20 wherein the antibodies are polyclonal antibodies.

1   23. A method for detecting a Repro-PC-1.0 polypeptide in a sample, comprising
2   the steps of:

3   (a) contacting the sample with an antibody that specifically binds to the Repro-
4   PC-1.0 polypeptide and

5   (b) detecting specific binding between the antibody and Repro-PC-1.0
6   polypeptide,

7   whereby specific binding provides a detection of Repro-PC-1.0 polypeptide in
8   the sample.

1   24. A method for use in the diagnosis of prostate cancer in a subject comprising
2   the steps of:

3   (a) detecting a diagnostic amount of Repro-PC-1.0 mRNA or Repro-PC-1.0
4   polypeptide in a sample from the subject; and

5   (b) comparing the diagnostic amount with a normal range of Repro-PC-1.0
6   mRNA or Repro-PC-1.0 polypeptide in a non-cancerous control sample,

7   whereby a diagnostic amount above the normal range provides a positive
8   indication in the diagnosis of prostate cancer.

1   25. The method of claim 24 wherein the sample is blood, urine, lymph node
2   tissue or prostate tissue.

1   26. A method of detecting prostate cancer cells in a subject comprising the steps
2   of:

3   (a) administering to the subject a compound comprising an antibody coupled to
4   a label and

5   (b) detecting the location of the compound in the subject.

1   27. The method of claim 26 wherein the label is (1) a radioactive label and the
2   step of detecting comprises detecting label by camera imaging, or (2) an isotopic label
3   and the step of detecting comprises detecting the label by magnetic resonance imaging.

1   28. A method for use in following the progress of prostate cancer in a subject
2   comprising the steps of:

3   (a) detecting first and second amounts of Repro-PC-1.0 mRNA or Repro-PC-

4   1.0 polypeptide in samples from the subject at a first and a second time: and

5   (b) comparing the first and second amounts.

6   whereby an increase between the first and second amounts indicates

7   progression of the prostate cancer and a decrease between the first and second amounts

8   indicates remission of the prostate cancer.

1   29. A method for the prophylactic or therapeutic treatment of prostate cancer in a

2   subject comprising administering to the subject an inhibitory polynucleotide of claim 10,

3   an inactive Repro-PC-1.0 analog polypeptide that acts as a decoy or a composition

4   comprising an immunotoxin that specifically binds to Repro-PC-1.0 polypeptide in an

5   amount effective to inhibit metastasis of prostate cancer cells, whereby inhibition of

6   metastasis provides the treatment of prostate cancer.

1   30. A polypeptide or polynucleotide vaccine for eliciting an immune response

2   against Repro-PC-1.0 comprising an immunogenic Repro-PC-1.0 polypeptide analog or a

3   polynucleotide encoding the analog.

1   31. The vaccine of claim 31 wherein the analog bears an MHC Class I or MHC

2   Class II binding motif.

1   32. A method of eliciting in a subject an immune response against a cell bearing

2   Repro-PC-1.0 polypeptide on its surface comprising administering to the subject a vaccine

3   of claim 27.

1   33. The method of claim 32 wherein the immune response is an MHC Class I-

2   restricted cell-mediated immune response and the vaccine comprises a recombinant

3   polynucleotide encoding an immunogenic Repro-PC-1.0 polypeptide analog bearing an

4   MHC Class I binding motif.

1   34. The method of claim 32 wherein the immune response is an MHC Class II-

2   restricted immune response and the vaccine comprises an immunogenic Repro-PC-1.0

3   polypeptide analog bearing an MHC Class II binding motif of a recombinant

4   polynucleotide encoding the analog.

1   35. A screening method for determining whether a compound modulates the

2   expression of Repro-PC-1.0 in a cell comprising contacting the cell with the compound

3   and determining whether the production of Repro-PC-1.0 mRNA or polypeptide are

4   increased or decreased.

1   36. A screening method for determining whether a compound inhibits the activity

2   of Repro-PC-1.0 comprising contacting a cell that expresses Repro-PC-1.0 with the

3   compound and determining whether the exocytois from the cell or capacitance across the

4   cell membrane is altered.

1   37. A method of detecting a chromosomal translocation of a Repro-PC-1.0 gene

2   comprising the steps of:

3   a) hybridizing a labeled probe of claim 7 to a chromosome spread from a cell

4   sample to determine the pattern of hybridization and

5   b) determining whether the pattern of hybridization differs from a normal

6   pattern.

1   38. A method of detecting polymorphic forms of Repro-PC-1.0 comprising

2   comparing the identity of a nucleotide or amino acid at a selected position from the

3   sequence of a test Repro-PC-1.0 gene or polypeptide with identity of the nucleotide or

4   amino acid at the corresponding position of native Repro-PC-1.0 (SEQ ID NO:1 or 2),

5   whereby a difference in identity indicates that the test polynucleotide is a polymorphic

6   form of Repro-PC-1.0.

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